

issues, in expectation of having to appeal the case. The base claim now presented removes that limitation. Claims 56 and 57 are newly presented.

The present claims are equal in scope to previously presented claims and are supported fully by the specification and the original claims. The amendments to the specification correct a spelling error. No new matter is presented.

#### **Rejection under 35 U.S.C. §132(a)**

The Examiner has rejected the claims as presenting new matter after a previous amendment replaced ‘cobaltocene-octgomet’ with ‘cobaltocene-octomet’. The Applicant understands that this rejection is now moot, in light of the following developments.

The Applicant now presents into the record a declaration by Dr. Sparkman. *See Exhibit 3*. That declaration has been introduced also into the record of U.S. Patent Application Ser. No. 10/320,492. The present patent application and the ‘492 application have identical specifications. Mr. Sparkman’s declaration states that its analysis reflects on both of the specifications and thus the conclusions of the declaration apply to both patent applications. The nomenclature situation is apparently now on its way to resolution in the ‘492 application, where now the compound is referred to as ‘cobaltocene-octamethyl.’ The Applicant has now amended the specification and the claims of the present application such that the compound is now referred to as ‘cobaltocene-octamethyl.’

In light of these developments, the Applicant respectfully requests that the rejection under 35 U.S.C. §132(a) be withdrawn.

#### **Rejection Under 35 U.S.C. § 112 ¶**

The Examiner has asserted that the recitation in the previous claim 32 was confusing because it was not clear if ‘plant material from leaves’ refers only to plant material from some leaf sub-tissue. The Applicant notes that the claims have now been amended, whereby the base claim no longer recites ‘plant material from leaves’ and that certain dependant claims instead recite ‘extracting from leaves an extract.’ Thus, the definiteness issue appears to be moot. The Applicant respectfully requests that this basis for rejecting the present claims be withdrawn.

The Applicant understands that the previously presented claims 42 - 49 were free of prior art. If now the rejections under 35 U.S.C. §132(a) and §112 are withdrawn, claims 42-49 are allowable. Please confirm.

The Applicant now pursues also claims that are not limited to extraction from leaves. This has been an issue not resolved in earlier prosecution. To restate the arguments made to date, the Examiner has asserted that two references of record, Beuter and Yang, show that the compounds discussed therein, kevapyrones and coumarins, respectively, are present in varying

amounts in the plant tissues of the plants discussed in Beuter and Yang. Therefore, the Examiner concluded, expression in more than one tissue in plant is unpredictable and the Applicant has exemplified only extraction from leaf.

The Applicant traversed and has previously pointed out that:

- The Examiner did not show that any compound is not detectable in any tissue, only differential levels of expression.
- The Examiner did not indicate any specific reason why stigmastan in particular could not be expressed in multiple tissues.
- To the contrary, Phuruengrat (a publication of record in the application) shows stigmastan, particularly, expressed in the three tissues of the herb Phuruengrat had tested (wood, leaf and root) and comments that stigmastan was shown to be present in various tissues in various other plants.
- The specification states that the extraction can be from other tissues in addition to leaves. *See, e.g.*, at page 4, starting on line 26.

Now the Applicant makes a further observation. The latest prior art cited by the Examiner, *Greenspan et al.*, shows the compounds of that publication (coumarins, compounds with insecticidal activity) to be present in the multiple/all tissues of the plant: “Extracts from all parts of *M. Americana* plants (including seeds, leaves, stems, roots, and fruit) have demonstrated toxicity against a wide range of insect pests ...” Page 237, left hand column. And then again on top of page 239: “Insecticidal activity could be detected using ground seeds and hexane extracts of seeds, leaves, or roots ...”

Clearly, the cumulative evidence from the prior art cited by the Examiner and the Applicant is that, typically, genes express in multiple tissues (although perhaps unevenly in respect to the level of expression). Stigmastan, in particular, is expressed in all tissues where it was tested: wood, leaf and root.

The Examiner is urged not to reissue a rejection of the claims as overly broad, when not restricted to extraction from leaves.

#### **Rejection of Claims under 35 U.S.C. §103(a).**

Claims 32, 33, and 39-41 are rejected under 35 USC §103(a) as obvious over Greenspan in light of McMurry. In particular, on page 6 of the OA, the Examiner notes that Greenspan extracted the seeds and leaves with hexane to elucidate the compounds present therein.

The Applicant respectfully traverses. For one, the Applicant’s claims include the further limitations of 1) eluting a particular fraction from the column, and 2) said fraction having the desired activity and/or comprising the compounds of interest (“eluting a fraction having antimicrobial activity”). The step is not recited by the prior art cited by the Examiner

Furthermore, the examiner has indicated that antimicrobial is inherent or obvious over insecticidal: “it is highly likely that the extract of Greenspan et al. was also antimicrobial in that it was a proven insecticide.” In a telephone conversation with the Applicant’s representative the Examiner provided the further explanation that because it was the same plant, *M. Americana*, finding the antimicrobial activity in the extract was “inherently obvious.”

The Applicant respectfully traverses. The courts have repeatedly cautioned:

As we pointed out in *In re Adams* ..., the inherency of an advantage and its obviousness are entirely different questions. That which may be inherent is not necessarily known. **Obviousness can not be predicted on what is unknown.** (Emphasis added).

363 F.2d 444, 150 USPQ 449 (CCPA 1966); *see also* 919 F.2d 688, 16 USPQ 2d 1897; 1922 (Fed. Cir. 1990) (en banc), certiorari denied 500 U.S. 904 (1991).

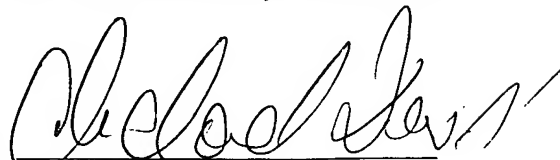
There is no reason why an antimicrobial agent would necessarily or likely have the insecticidal activity and vice-versa. Bacteria are prokaryotes. Insects are eukaryotes. Their membranes are different. The target tissue/molecule are typically different; antibacterial agents most commonly attack the ribosome, insecticidal agents often alter the permeability of membranes.

The prior art cited by the Examiner recites ‘insecticidal’, not antibacterial, let alone antimicrobial. The authors of the prior art cited by the Examiner explain that their work was motivated by work by many others, including work by Crombie and his colleagues who report insecticidal activity from *M. Americana*. *See* the two paragraphs preceding Material and Methods, on page 237, in Greenspan. The Examiner and the Applicant have looked at work by Crombie also, in previous OAs and Responses. Indeed these numerous scientists cited internally by Greenspan and by Crombie (including a review article by Crombie, cited by Greenspan), apparently referred only to insecticidal activity. (Even insecticidal activity, apparently, was not enabled enough to make any of these groups pursue a product.) If expectation of anti-bacterial activity were obvious, you would think one of these science teams would try to test also for antibacterial activity. As the Court noted: “Obviousness can not be predicted on what is unknown.” *Id.*

In light of the prior art not teaching extraction a particular fraction, said fraction having particular activity and in light of the prior art also not teaching that the particular activity is antimicrobial activity, the Applicant respectfully requests that the rejection of the claims under 35 U.S.C. §103 be withdrawn.

Should the Examiner determine at any time during prosecution of this application that a telephone conversation with Applicant's representatives would be useful to clarify or expedite matters, she is invited to call the undersigned.

Date: June 29, 2008

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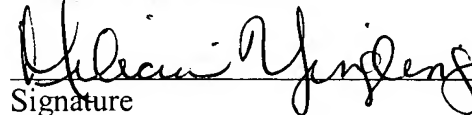
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